

# ERROR PROTECTED RAM

## conga-QG



- AMD Embedded G-Series SOC APU
- ECC protected on module memory up to 8 GByte
- Power saving „Steppe Eagle“ processors
- High performance integrated graphics
- Temperature range up to -40°C .. +85°C



Formfactor	Qseven Form Factor Rev. 2.0 compliant, 70x70 mm				
CPU	AMD Embedded GX-Series processors				
	AMD Embedded GX-210HA SOC	Dual Core	CPU freq. 1.0 GHz	GPU freq. 300MHz	9W TDP
	AMD Embedded GX-210JA SOC	Dual Core	CPU freq. 1.0 GHz	GPU freq. 255MHz	6W TDP
	AMD Embedded GX-209HA SOC	Dual Core	CPU freq. 1.0 GHz	GPU freq. 255MHz	9W TDP Ext. Temp
	AMD Embedded GX-412HC SOC	Quad Core	CPU freq. 1.2 GHz / 1.6GHz (Boost)		7W TDP
	AMD Embedded GX-212JC SOC	Dual Core	CPU freq. 1.2 GHz / 1.4GHz (Boos)		6W TDP
DRAM	Up to 8GB ECC DDR3L-1333				
Chipset	Integrated in SOC (single-chip)				
Ethernet	Gigabit Ethernet				
I/O Interfaces	up to 4x PCI Express™ 2.0 lanes, 2x SATA® 3Gb/s, 1x USB 3.0, 5x USB2.0, LPC bus, SMBus, I²C bus (fast mode, 400 kHz, multi-master), SD Card or SDIO, UART				
Mass Storage	Silicon Motion FerriSSD® up to 64GB				
Sound	High Definition Audio Interface				
Graphics	integrated AMD Radeon™ HD 8000E Graphics, High Performance Video, DirectX 11.1 GPU supports two simultaneous displays, Unified Video Decoder 4.2 (H.264, MPEG-2, VC-1, MPEG4 and WMV), Video Compression Engine 2.0 (Video conferencing, wireless display, H.264, SVC), Security Asset Management Unit 2.1 (DRM offloaded from CPU, HDCP2)				
LVDS	18/24-bit Single/Dual Channel LVDS Interface, resolutions up to 1920X1200@60Hz, VESA standard or JEIDA data mapping, Automatic Panel Detection via EDID/EPI				
Digital Display Interface (DDI)	One DisplayPort 1.2 / HDMI 1.4a				
congatec Board controller	Multi Stage Watchdog, non-volatile User Data Storage, Manufacturing and Board Information, Board Statistics, BIOS Setup Data Backup, I²C bus (fast mode, 400 kHz, multi-master), Power Loss Control, Backlight				
Embedded BIOS Features	AMI Aptio® UEFI firmware with congatec Embedded BIOS features				
Power Management	ACPI 3.0 with battery support				
Operating Systems	Microsoft® Windows 8, Microsoft® Windows 7, Linux, Microsoft® Windows 7/8 embedded Standard, Microsoft® Windows 7 Embedded Compact				
Power Consumption	Typ. application: tbd., see manual for full details				
Temperature	Operating: 0 .. +60°C Storage: -20 .. +80°C Industrial : Operating: -40 to +85°C Storage: -45 to +85°C				
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.				
Size	70 x 70 mm (2¾" x 2¾")				

# conga-QG | Block diagram



# conga-QG | Order Information

Article	PN	Description
conga-QG/210HA-2GECC	015600	Qseven 2.0 module based on AMD Embedded G-Series GX-210HA SOC dual core processor with 9W TDP, 1.0GHz, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon HD 8210E graphics.
conga-QG/210JA-2GECC	015601	Qseven 2.0 module based on AMD Embedded G-Series SOC GX-210JA dual core processor with 6W TDP, 1.0GHz, 1MB L2 cache and 2GB 1066MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8200E graphics.
conga-QG/210HA-2GECC SSD4	015602	Qseven 2.0 module based on AMD Embedded G-Series SOC GX-210HA dual core processor with 9W TDP, 1.0GHz, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8210E Graphics and 4GB onboard SATA SSD.
conga-QG/i-209HA-2GECC	015610	Qseven 2.0 module based on AMD Embedded G-Series SOC GX-209HA dual core processor with 9W TDP, 1.0GHz, 1MB L2 cache and 2GB 1066MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics. Industrial grade temperature range from -40°C to 85°C.
conga-QG/412HC-4GECC	015620	Qseven 2.0 module based on AMD Embedded G-Series SOC GX-412HC quad core processor with 7W TDP, 1.2GHz, 2MB L2 cache and 4GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ graphics with 300MHz GPU frequency.
conga-QG/212JC-2GECC	015621	Qseven 2.0 module based on AMD Embedded G-Series SOC GX-212JC dual core processor with 6W TDP, 1.2GHz, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ graphics with 300MHz GPU frequency.
QG/HSP-T	015650	Standard heatspreader for Qseven module conga-QG. All standoff are M2.5mm thread.
QG/HSP-B	015651	Standard heatspreader for Qseven module conga-QG. All standoff are with 2.7mm bore hole.
QG/CSP-T	015652	Passive cooling solution for Qseven module conga-QG. All standoff are M2.5mm thread.
QG/CSP-B	015653	Passive cooling solution for Qseven module conga-QG. All standoff are with 2.7mm bore hole.
<b>Accessories</b>		
conga-QEVAL 2.0	007003	Evaluation platform for Qseven 2.0 modules
conga-QKIT	077455	Starterkit for Qseven including conga-QEVAL, conga-LDVI/EPI, conga-FPA2, Dual DVI-D ADD2 Card, ATX power supply...
conga-Qseven/SBM3	025485	Mobility Starter Kit
Qseven MXM connector Foxconn	400017	Socket for Qseven Carrier Boards. 10pcs package. Foxconn standard type, SMT, lead free, 230 positions, 0.50mm pitch, 7.8mm height.
Qseven MXM Connector Aces	400018	Socket for Qseven Carrier Boards. 10pcs package. ACES standard type, SMT, lead free, 230 positions, 0.50mm pitch, 7.8mm height.
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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